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(19) **United States**(12) **Patent Application Publication**  
**Hess et al.**(10) **Pub. No.: US 2002/0001544 A1**(43) **Pub. Date: Jan. 3, 2002**(54) **SYSTEM AND METHOD FOR HIGH THROUGHPUT PROCESSING OF DROPLETS**

is a non-provisional of provisional application No. 60/057,734, filed on Aug. 28, 1997.

**Publication Classification**(76) Inventors: **Robert Hess**, Brighton, MA (US);  
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**Ian Hunter**, Lincoln, MA (US)(51) **Int. Cl.<sup>7</sup>** ..... **B01L 3/02**; G01N 1/10(52) **U.S. Cl.** ..... **422/100**; 436/180(57) **ABSTRACT**

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A method for high throughput processing of a plurality of droplets. The droplets are dispensed onto a moving surface and delayed in a delay line in which the droplets hang from the moving surface for at least a specified minimum period of time. A laminate may be spooled onto the moving surface and each droplet may be dispensed onto the laminate. At least one operation is performed on each droplet from the group of operations consisting of mixing, diluting, concentration, heating, cooling, humidifying, filtering, and analyzing. The laminate may then, in certain embodiments, be spooled off the moving surface, processed, and reused.

